

Amendments to the Claims:

1. (currently amended) A personal communications network unit ~~for use in a spread spectrum code division multiple access (CDMA) communication system which co exists with a diverse communications system, the diverse communications system selectively utilizing various frequencies within a selected range of frequencies, the unit comprising:~~

means for generating circuitry configured to generate a spread spectrum code division multiple access (CDMA) data signal using a pseudo random chip code sequences the spread data signal encompassing the a selected range of frequencies;

~~means for circuitry configured to notch filtering the spread data signal at frequencies within the selected range used by the diverse communications system;~~
and

~~means for transmitting a transmitter configured to transmit the notch filtered spread data signal to a base station.~~

2. (currently amended) The unit of claim 1 further comprising ~~means for determining circuitry configured to determine~~ frequencies currently used ~~by the diverse communications system~~ that have a spectrum overlapping a spectrum of the spread data signal; wherein the notch filtering is at the determined frequencies.

3. (currently amended) The unit of claim 2 further comprising ~~means for detecting circuitry configured to detect~~ received signal power associated with the overlapping frequencies; wherein the determining of the overlapping frequencies is based on in part the detected received power.

4. (currently amended) The unit of claim 2 wherein each of the overlapping frequencies has an associated bandwidth, the unit further comprising:

~~means for determining~~ circuitry configured to determine the bandwidth for each of the overlapping frequencies; wherein the notch filtering filters a bandwidth at each of the overlapping frequencies based on in part that frequency's determined bandwidth.

5. (currently amended) The unit of claim 2 ~~wherein the unit further comprises~~ comprising:

~~means for receiving~~ circuitry configured to receive a command indicating the overlapping frequencies ~~transmitted from the base station~~; wherein the determining of the overlapping frequencies is based on in part the received command.

6. (currently amended) The unit of claim 1 further comprising:

~~means for receiving~~ circuitry configured to receive a base spread spectrum CDMA data signal and ~~recovering~~ recover data from the base data signal; wherein the base data signal being notched filtered at the frequencies within the selected range.

7. (currently amended) The unit of claim 6 further comprising:

~~means for~~ circuitry configured to notch filtering the received base data signal at the frequencies within the selected range prior to the recovering of data.

8. (currently amended) The unit of claim 7 further comprising ~~means for determining~~ circuitry configured to determine frequencies currently used ~~by the diverse communications system~~ that have a spectrum overlapping a spectrum of the

spread data signal and received base CDMA data signal; wherein the notch filtering of the spread data signal is at the overlapping frequencies and the notch filtering of the received base data signal is at the overlapping frequencies.

9. (currently amended) The unit of claim 8 further comprising ~~means for detecting~~ circuitry configured to detect a received signal power associated with the overlapping frequencies wherein the determining of the overlapping frequencies is based on in part the detected received signal power.

10. (currently amended) The unit of claim 8 wherein each of the overlapping frequencies has an associated bandwidth, the unit further comprising:
~~means for determining~~ circuitry configured to determine the bandwidth for each of the overlapping frequencies; wherein the notch filtering of the spread data signal and the base data signal filters a bandwidth of each of the overlapping frequencies based on in part that frequency's determined bandwidth.

11. (currently amended) The unit of claim 8 wherein the unit further comprises:
~~means for receiving~~ circuitry configured to receive a command indicating the overlapping frequencies transmitted from the base station; wherein the determining of the overlapping frequencies is based on in part the received command.

12. (currently amended) A personal communications network unit ~~for use in a spread spectrum code division multiple access (CDMA) communication system which co-exists with a diverse communications system, the frequencies within a selected range of frequencies, the unit~~ comprising:

a mixer ~~for mixing~~ configured to mix a data signal with a pseudo random chip code sequence to generate a spread spectrum code division multiple access (CDMA) data signal, the spread data signal encompassing ~~the~~ a selected range of frequencies;

an adaptive notch filter ~~for~~ configured to notch filtering the spread data signal at frequencies within the selected range ~~used by the diverse communications system;~~ and

an antenna ~~for transmitting~~ configured to transmit ~~to a base station~~ the notch filtered spread data signal.

13. (currently amended) The unit of claim 12 further comprising a sensor ~~detecting~~ configured to detect a received signal power associated with the frequencies that have a spectrum overlapping a spectrum of the spread data signal, the detected received signal power used to determine the overlapping frequencies; wherein the adaptive notch filtering is at the determined frequencies.

14. (currently amended) The unit of claim 12 wherein the antenna ~~receives is~~ configured to receive a command ~~transmitted from the base station~~ indicating the overlapping frequencies and the adaptive notch filtering is at the indicated overlapping frequencies.

15. (currently amended) The unit of claim 12 further comprising a controller operatively coupled to the adjustable notch filter ~~for controlling~~ configured to control the adjustable notch filter ~~to filter at the frequencies used by the diverse communications system.~~

16. (currently amended) The unit of claim 12 further comprising a local oscillator ~~for modulating~~ configured to modulate the notch filtered spread data signal to radio frequency.

17. (currently amended) The unit of claim 12 wherein the antenna ~~receives~~ is configured to receive a base station spread spectrum CDMA data signal; wherein the base data signal being notch filtered at the frequencies within the selected range.

18. (currently amended) The unit of claim 17 further comprising:
a despreader ~~for despread~~ configured to disperse the base data signal;
a bandpass filter ~~for filtering~~ configured to filter the despread base data signal; and
a detector ~~for detecting~~ configured to detect data within the despread base filtered data signal.

19. (currently amended) A personal communications network unit ~~for use in a spread spectrum code division multiple access (CDMA) communication system which co exists with a diverse communications system, the diverse communications system selectively utilizing various frequencies within a selected range of frequencies, the unit~~ comprising:

a modulator ~~for converting~~ configured to convert a data signal into a format suitable for communicating over radio waves;
a spread spectrum modulator ~~for spreading~~ configured to spread the converted data signal using a pseudo random code sequence; and

a transmitter ~~for transmitting~~ configured to transmit the spread data signal over a spectrum encompassing ~~the a~~ selected range of frequencies; whereby at a ~~base station~~ data is recovered from the transmitted spread data signal by notch filtering at the frequencies within the selected range.

20. (currently amended) A base station ~~for use in a spread spectrum code division multiple access (CDMA) communication system which co-exists with a diverse communications system, the diverse communications system selectively utilizing various frequencies within a selected range of frequencies, the base station comprising:~~

~~means for generating~~ circuitry configured to generate a plurality of spread spectrum CDMA data signals using pseudo random chip code sequences, the spread data signals encompassing ~~the a~~ selected range of frequencies;

~~means for~~ circuitry configured to notch filtering the spread data signals at frequencies within the selected range ~~used by the diverse communications system;~~
and

~~means for transmitting~~ circuitry configured to transmit the notch filtered spread data signals to personal communication network units.

21. (currently amended) The base station of claim 20 further comprising ~~means for determining~~ circuitry configured to determine frequencies currently used ~~by the diverse communications system~~ that have a spectrum overlapping a spectrum of the spread data signal; wherein the notch filtering is at the determined frequencies.

22. (currently amended) The base station of claim 21 further comprising ~~means for detecting~~ circuitry configured to detect a received signal power associated with the overlapping frequencies; wherein the determining of the overlapping frequencies is based on in part the detected received signal power.

23. (currently amended) The base station of claim 21 wherein each of the overlapping frequencies has an associated bandwidth, the unit further comprising:
~~means for determining~~ circuitry configured to determine the bandwidth for each of the overlapping frequencies; wherein the notch filtering filters a bandwidth at each of the overlapping frequencies based on in part that frequency's determined bandwidth.

24. (currently amended) The base station of claim 20 further comprising:
~~means for receiving~~ circuitry configured to receive a plurality of unit spread spectrum CDMA data signals and recovering data from the unit data signals; wherein the unit data signals being notch filtered at the frequencies within the selected range.

25. (currently amended) The base station of claim 24 further comprising:
~~means for~~ circuitry configured to notch filtering the received unit data signals at the frequencies within the selected range prior to the recovering of data.

26. (currently amended) The base station of claim 25 further comprising ~~means for determining~~ circuitry configured to determine frequencies currently used ~~by the diverse communications system~~ that have a spectrum overlapping a spectrum of the spread data signals and received unit CDMA data signals; wherein

the notch filtering of the spread data signals is at the overlapping frequencies and the notch filtering of the received unit data signals is at the overlapping frequencies.

27. (currently amended) The base station of claim 26 further comprising ~~means for detecting~~ circuitry configured to detect a received signal power associated with the overlapping frequencies wherein the determining of the overlapping frequencies is based on in part the detected received signal power.

28. (currently amended) The base station of claim 26 wherein each of the overlapping frequencies has an associated bandwidth, the unit further comprising: ~~means for determining~~ circuitry configured to determine the bandwidth for each of the overlapping frequencies; wherein the notch filtering of the spread data signal and the base data signal filters a bandwidth of each of the overlapping frequencies based on in part that frequency's determined bandwidth.

29. (currently amended) A base station ~~for use in a spread spectrum code division multiple access (CDMA) communication system which co-exists with a diverse communications system, the frequencies within a selected range of frequencies, the base station~~ comprising:

a plurality of mixers ~~for mixing~~ configured to mix data signals with pseudo random chip code sequences to generate a plurality of spread spectrum CDMA data signals, the spread data signals encompassing ~~the~~ a selected range of frequencies;

a plurality of adaptive notch filters ~~for~~ configured to notch filtering the spread data signals at frequencies within the selected range ~~used by the diverse communications system; and~~

an antenna ~~for transmitting~~ configured to transmit to personal communication network units the combined signal.

30. (currently amended) The base station of claim 29 further comprising a sensor ~~detecting~~ configured to detect a received signal power associated with the frequencies that have a spectrum overlapping a spectrum of the spread data signal, the detected received signal power used to determine the overlapping frequencies; wherein the adaptive notch filtering is at the determined frequencies.

31. (currently amended) The base station of claim 29 further comprising a controller operatively coupled to the ~~adjustable~~ adaptive notch filters ~~for controlling~~ configured to control the adjustable notch filters to filter at the frequencies used by the diverse communications system.

32.-37. (canceled)

38. (currently amended) A base station ~~for use in a spread spectrum code division multiple access (CDMA) communication system which co-exists with a diverse communications system, the frequencies within a selected range of frequencies, the base station~~ comprising:

a first plurality of mixers ~~for mixing~~ configured to mix data signals with pseudo random chip code sequences to generate a plurality of spread spectrum CDMA data signals;

a second plurality of mixers ~~for mixing~~ configured to mix the spread data signals with an intermediate frequency (IF) signal as a plurality of IF spread data signals;

a plurality of adaptive notch filters ~~for~~ configured to notch filter the IF data signals;

a third plurality of mixers ~~for mixing~~ configured to mix the filtered IF data signals with a radio frequency (RF) signal as spread RF data signals; wherein the spread RF data signals are effectively notch filtered at frequencies within ~~the a~~ a selected range[[s]] of frequencies; and

an antenna ~~for transmitting~~ configured to transmit to personal communication network units the spread RF data signals.

39. (currently amended) The base station of claim 38 further comprising a combiner ~~for combining~~ configured to combine the spread RF data signals prior to transmission.

40. (currently amended) A spread spectrum base station comprising:
~~means for generating~~ circuitry configured to generate a plurality of spread spectrum signals, the spread spectrum signals encompassing a selected frequency spectrum;

~~means for detecting~~ circuitry configured to detect frequencies within the selected frequency spectrum by a diverse signal associated with the detected frequencies;

~~means for~~ circuitry configured to notch filter the spread spectrum signals so that a transmitted version of the spread spectrum signals is notch filtered at the detected frequencies; and

~~means for transmitting~~ circuitry configured to transmit the notch filtered spread spectrum signals.

41. (original) The base station of claim 40 wherein the notch filtering is performed at intermediate frequency.

42. (original) The base station of claim 40 wherein the notch filtering is performed at radio frequency.

43. (currently amended) A spread spectrum base station comprising:
a plurality of mixers ~~for mixing~~ configured to mix data signals with codes to generate a plurality of spread spectrum signals;
a sensor ~~for detecting~~ configured to detect frequencies within a selected frequency spectrum by a diverse signal associated with the detected frequencies;
a plurality of notched filters ~~for~~ configured to notch filtering the spread spectrum signals so that a transmitted version of the spread spectrum signals is notch filtered at the detected frequencies; and
an antenna ~~for transmitting~~ configured to transmit the notch filtered spread spectrum signals.

44. (original) The base station of claim 43 wherein the notch filtering is performed at intermediate frequency.

45. (original) The base station of claim 43 wherein the notch filtering is performed at radio frequency.